

Claims

[c1] WHAT IS CLAIMED IS:

1.A cleaning tool for a vacuum cleaning device, the cleaning tool comprising:
a housing having a bottom plate provided with a working slot;
a rotatingly driven working tool rotatably supported in the housing and passing through the working slot so as to act on a surface to be cleaned;
a motor arranged in the housing and having a motor shaft;
a gear system connected between the motor and the working tool, wherein the gear system has a driving wheel driven by the motor shaft and a driven wheel fixedly connected to the working tool;
wherein the driving wheel and the driven wheel are V-belt pulleys and have a peripheral groove, respectively;
wherein the gear system further comprises a V-gear positioned between the driving wheel and the driven wheel, wherein the V-gear has an outer periphery that engages the peripheral grooves for establishing a driving connection between the driving wheel and the driven wheel.

- [c2] 2. The cleaning tool according to claim 1, wherein the outer periphery of the V-gear is elastic.
- [c3] 3. The cleaning tool according to claim 2, wherein the outer periphery is comprised of an elastic V-belt ring.
- [c4] 4. The cleaning tool according to claim 3, wherein the V-gear has a base member and the V-belt ring has a trapezoidal cross-section having a long base and a short base, wherein the long base is secured on the base member.
- [c5] 5. The cleaning tool according to claim 1, wherein at least one of the V-gear and one of the driving and driven wheels are movable relative to one another.
- [c6] 6. The cleaning tool according to claim 5, wherein the driving wheel has a first rotary center point and the driven wheel has a second rotary center point, wherein the first and second rotary center points define a connecting line, and wherein a rotary center point of the V-gear is positioned at a spacing from the connecting line.
- [c7] 7. The cleaning tool according to claim 6, wherein the first and second rotary center points are fixed at the housing and wherein the V-gear is movable into a gap between the driving wheel and the driven wheel.

- [c8] 8. The cleaning tool according to claim 7, further comprising a pivot arm, wherein the V-gear is secured on the pivot arm, and wherein a maximum pivot stroke of the pivot arm is limited by a stop.
- [c9] 9. The cleaning tool according to claim 7, wherein the V-gear is loaded by a contacting force into the gap between the driving and driven wheels.
- [c10] 10. The cleaning tool according to claim 9, wherein the contacting force at least one of a weight force and a spring force.
- [c11] 11. The cleaning tool according to claim 5, wherein the driven wheel is movable relative to an axis of rotation of the V-gear.
- [c12] 12. The cleaning tool according to claim 4, wherein the V-gear has a base member that is disc-shaped and has an axial thickness matching approximately a thickness of a base area of the elastic V-belt ring.
- [c13] 13. The cleaning tool according to claim 12, wherein the V-belt ring is comprised of a polyurethane mixture.
- [c14] 14. The cleaning tool according to claim 12, wherein the V-belt ring has tension cords comprised of fabric.
- [c15] 15. The cleaning tool according to claim 1, wherein the

working tool comprises a changing carrier and wherein the working tool is detachably secured with the changing carrier at the housing.

- [c16] 16. The cleaning tool according to claim 1, wherein a depth of the peripheral groove of at least one of the driving and driven wheels is greater than an engagement depth of the outer periphery of the V-gear.